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Warm-Up | States of Matter

Lesson Question

Lesson Goals

Compare _____, liquids, and _____.

Discuss the _____ of atoms in different states of matter.

Describe the _____ of atoms in different states of matter.

Identify the characteristics of solids, _____, and gases.

Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	a solid whose atoms lack a particular pattern
	a solid whose atoms are arranged in a repeating pattern
	the result of water molecules pulling inwards with a strong attractive force
	unchanging; not likely to change
	a liquid's resistance to flow

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Matter

- Matter:
  - makes up all _____ and _____ .
  - is made up of very small particles called _____ .
- Atoms:
  - are the smallest _____ of matter.
  - cannot be _____ .

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Atoms in a Solid

The atoms in a solid:

- Stay in a _____ position
- Have no freedom to _____
- Are held together by _____ attractions
- Vibrate in _____

Atoms in a Solid: Types of Solids

- Atoms in a _____ solid are found in a repeating pattern called crystals.
- Atoms in a _____ solid have no particular order or pattern.

Characteristics of Solids

Solids:

- Have a _____ shape
  - No _____ needed
- Have definite _____

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Atoms in a Liquid

Atoms in a liquid:

- Are [ ] packed
- [ ] past each other

Characteristics of Liquids

Liquids:

- Change [ ]
  - Fit the [ ] of a container
- Have [ ] volume

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Characteristics of Liquids: Viscosity

- **Viscosity:**
  - Resistance to [ ]
    - Slower flow = [ ] viscosity
  - Depends on size and shape of [ ]
    - Strong attraction = [ ] viscosity

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Characteristics of Liquids: Surface Tension

- **Surface tension:**
  - Water molecules pulling [ ]
  - [ ] attractive force
  - [ ] forces

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Atoms in a Gas

Atoms in a gas:

- Are [ ] apart
- Move constantly at [ ] speeds
- Move [ ] in all directions
- [ ] to fill available space

Characteristics of Gases

Gases:

- Change [ ]
- Change [ ]

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Solids, Liquids, and Gases

Fill in the table to compare the characteristics of solids, liquids, and gases.

	Arrangement of Atoms	Definite Shape	Definite Volume
Solids	[ ]; vibrate in place		Yes
Liquids	Closely packed; [ ] past each other	No	
Gases	Move [ ]; spread out		No

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Lesson Question

How do solids, liquids, and gases differ?

Answer

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Review: Key Concepts

Complete the table to describe the characteristics of solids, liquids, and gases.

State of Matter	Arrangement of Atoms	Definite Shape	Definite Volume
	Fixed; vibrate in place		
	Closely packed; slide past each other		
	Move freely; spread out		

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Use this space to write any questions or thoughts about this lesson.

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